Amendments to the Specification:

Consistent with the Office Action in this case dated October 17, 2006, amendments to the specification herein, including paragraph numbers, refer to the published patent application 2005/0100712, published May 12, 2005.

Please amend the following paragraphs as indicated.

[0031] For economy of language, we use "surface diffusion zone" to indicate that region of the workpiece adjacent to the surface to be joined, and lying within the workpiece, containing the polymerizable material prior to the joining of the workpieces, for example, as depicted schematically as 3 in Fig. 1 and Fig. 2. This region containing polymerizable material is typically and conveniently created by the application of the polymerizable material to the surface of the workpiece to be joined, followed by diffusion through the surface and into the adjacent region within the workpiece. However, embodiments of the present invention typically make use of the polymerizable material in the surface diffusion zone adjacent to the surface to be joined and do not depend on the details of how this zone is created. For example, in addition to diffusion through the surface to be joined, the entire plastic substrate may be immersed in polymerizable material. The workpiece may be initially formed with polymerizable material included therein during the formation process. Diffusion can be assisted by application of proper temperature, pressure, catalysts, or other diffusion-promoting devices. Thus, the

"surface diffusion zone" need not be created strictly by diffusion through the surface to be joined, although this is found to be a convenient method for some of the embodiments described herein. Similarly, the surface diffusion zone need not have a minimum or a maximum thickness, merely that sufficient polymerizable material be present at or near the surface or surfaces to be joined that an adequately strong joint is formed.

[0033] One advantage of polymerization welding over some other joining techniques is that microfeatures on the surface of a workpiece are typically not clogged, blocked or otherwise disturbed by adhesive added during the joining process. This is particularly advantageous in the fabrication of microfluidic devices in which typical microfeatures are intended to carry fluids. However, other types of microfeatures, such as holograms, may also be found on surfaces of workpieces to be joined and would likely be harmed by the collection of extraneous adhesive or other material within its structure. To be concrete in our descriptions, we consider polymerization welding chiefly in connection with particular examples derived from the fabrication of microfluidic devices and the microfeatures typically occurring in such devices. However, it is understood that "microfeature" is not limited to channels, vias or other structures typically occurring in microfluidic devices and, indeed, need not be particularly small in size. "Microfeature" is used herein to describe a general structure on the surface of a workpiece to be joined analogous to those depicted in Figs. 2 and 3, added to or incorporated into the surface of the workpiece to aid in its intended function.